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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/736,820	12/14/2000	Hao A. Chen	3620-036-01	8675

33432 7590 04/13/2005  
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WARRENTON, VA 20186

EXAMINER

RHEE, JANE J

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 04/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/736,820

Applicant(s)

CHEN ET AL.

Examiner

Jane Rhee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6, 19, 20, 22, 23 and 27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 19-20, 22-23, 27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Rejections Withdrawn***

1. The 35 U.S.C. 102(b) rejection of claims 1, 5-6, 22 anticipated by Fricke et al. has been withdrawn due to applicant's arguments on 3/28/2005.
2. The 35 U.S.C. 103(a) rejection of claims 2-4 over Fricke et al. has been withdrawn due to applicant's arguments on 3/28/2005.
3. The 35 U.S.C. 103(a) rejection of claim 19, over Fricke et al. in view of Park has been withdrawn due to applicant's arguments on 3/28/2005.
4. The 35 U.S.C. 103(a) rejection of claim 20 over Fricke et al. in view of Park et al. and in further view of Peralt Anstalt has been withdrawn due to applicant's arguments on 3/28/2005.
5. The 35 U.S.C. 103(a) rejection of claim 23 over Fricke et al. in view of Park et al. has been withdrawn due to applicant's arguments on 3/28/2005.
6. The 35 U.S.C. 103(a) rejection of claim 27, over Fricke et al. in view of Andrews has been withdrawn due to applicant's arguments on 3/28/2005.

### ***New Rejections***

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 5 recites the limitation "thermoplastic" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-2,4-6,19,22-23,27, are rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al. in view of Skinner (4087400).

As to claim 1, and 19, Park et al. discloses a floor surface (col. 1 line 58-60) comprising two or more polymeric flooring planks having edges (figure 2 number 38), where the planks are connected to each other by a spline (col. 5 line 58). As to claim 22, Park et al. discloses that the polymeric flooring plank is in the shape of a tile (figures 1 and 2). As to claim 23, Park et al. discloses that the flooring plank has a polymeric core (col. 3 lines 47-48) with a laminate affixed on the surface (figure 2 number 38) of the core (figure 2 number 34)

As to claims 2,4-6, 20 and 27, Park et al. fail to disclose that the planks are connected to each other by a welding agent, wherein the welding agent is present on at least one of the planks, and wherein the chemical agent comprises at least one solvent that at least bonds the edges of the planks. Park et al. fails to disclose that the chemical welding agent is present on at least each edge of each thermoplastic plank connected together to another thermoplastic plank. Park et al. fails to disclose that the chemical welding agent is present on two opposite edges of each individual plank. Park

et al. fails to disclose that the chemical welding agent consists essentially of tetrahydrofuran. Park et al. fail to disclose that the chemical welding agent comprises at least two different solvents capable of at least bonding the edges of the polymeric portion of the plank.

Skinner teaches that sections of the vinyl flooring are sealed together in very closely abutting relation when the sealing composition is applied wherein the sealing composition consists essentially of tetrahydrofuran and about 5-60% of an organic solvent (col. 2 lines 21) for the purpose of improving the process of joining together sections of sheet vinyl flooring (col. 1 lines 47-52).

Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to provide Park et al. a welding agent that is present on at least one edge of each thermoplastic plank that is connected together to another thermoplastic plank and further the welding agent is present on opposite edges of each individual plank wherein the welding agent consist essentially of tetrahydrofuran and a small percentage of a different solvent in order to improve the process of joining together sections of the vinyl flooring as taught by Skinner (col. 1 lines 47-52).

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al. in view of Peralta Anstalt (1178565)..

Park et al. discloses the floor surface covering described above. Park et al. fail to disclose a welding agent consisting of tetrahydrofuran. Peralta Anstalt teaches two polymeric planks with a bonding agent of tetrahydrofuran for the purpose of connecting two sheets by temporarily dissolving and respectively plasticizing the plastics material

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so that a connection similar to a welded connection is obtained under pressure (col. 1 lines 25-30).

Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to provide Fricke et al. with a bonding agent of tetrahydrofuran in order to connect two sheets by temporarily dissolving and respectively plasticizing the plastics material so that a connection similar to a welded connection is obtained under pressure (col. 1 lines 25-30) as taught by Anstalt.

10. Claims 1-6,22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fricke et al. (6227759) in view of Peralt Anstalt (1178565).

As to claim 1, Fricke et al. discloses a floor surface (col. 1 line 11-12) comprising two or more polymeric flooring planks having edges (col. 2 lines 36-38), where the planks are connected to each other by welding (col. 2 line 38-39), wherein the welding agent is present on at least one of the planks (figure 3 number 6a). As to claim 22, Fricke et al. discloses that the polymeric flooring plank is in the shape of a tile (figure 2 number 1a).

As to claims 2-6, Fricke et al. fail to disclose that the planks are connected to each other by chemical welding, wherein the chemical welding agent is present on at least each edge of each thermoplastic plank connected together to another thermoplastic plank and furthermore that the chemical welding agent is present on two opposite edges of each individual plank wherein the chemical agent consists of tetrahydrofuran. Peralt Anstalt teaches two polymeric planks with a bonding agent of tetrahydrofuran for the purpose of connecting two sheets by temporarily dissolving and

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respectively plasticizing the plastics material so that a connection similar to a welded connection is obtained under pressure (col. 1 lines 25-30).

Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to provide Fricke et al. with a chemical welding agent that is present on at least each edge of each thermoplastic plank connected together to another thermoplastic plank and furthermore that the chemical welding agent is present on two opposite edges of each individual plank wherein the chemical agent consists of tetrahydrofuran in order to connect two sheets by temporarily dissolving and respectively plasticizing the plastics material so that a connection similar to a welded connection is obtained under pressure (col. 1 lines 25-30) as taught by Anstalt.

11. Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fricke et al. in view Peralt Anstalt (1178565) and in further view of Park et al. (5837343).

Fricke et al. in view of Peralt Anstalt discloses the floor surface described above. Fricke et al. fail to disclose Fricke et al. fail to disclose splines located between at least a portion of the polymeric planks.

Park et al. teaches a polymeric spline located between a portion of the polymeric planks (figure 2 number 46) for the purpose of holding the panels in precise vertical alignment (col. 5 lines 50-51).

Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to provide Fricke et al. with splines located

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between at least a portion of the polymeric planks, wherein at least a portion of the planks and splines are connected to each other by chemical welding agent comprising at least one solvent that chemically welds at least the spline and plank together, wherein the chemical welding agent is applied to at least one of the edges of at least one of the individuals planks in order to hold the panels in precise vertical alignment (col. 5 lines 50-51) as taught by Park et al.

12. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fricke et al. Peralt Anstalt (1178565) and in further view of Park et al. (5837343).

Fricke et al. in view of Peralt Anstalt discloses the floor surface described above. Fricke et al. fail to disclose that the polymeric flooring plank has a polymeric core with a laminate affixed on the surface of the core. Park et al. teaches polymeric flooring plank has a polymeric core (figure 1 number 12) with a laminate affixed on the surface of the core (figure 1 number 14) for the purpose of providing an improved composite structure presenting low friction properties that can incorporate into a surface and provide high dimensional stability and durability, together with a consist friction reducing property (col. 1 lines 51-55).

Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to provide Fricke et al. with a laminate affixed on the surface of the core in order to provide a composite structure presenting low friction properties that can incorporate into a surface and provide high dimensional stability and durability, together with a consist friction reducing property (col. 1 lines 51-55) as taught by Park et al.



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13. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fricke et al. in view of Peralt Anstalt (1178565) and in further view of Andrews (2495680).

Fricke et al. in view of Peralt Anstalt discloses the floor surface described above. Fricke et al. fail to disclose a welding agent that comprises at least two different solvents capable of at least bonding the edges of the polymeric portion of the plank. Andrews teaches a welding agent that comprises at least two different solvents capable of at least bonding the edges of the polymeric portion of the plank (col. 3 lines 41-46) for the purpose of developing a seam with strength equal to the strength of the plastic sheets (col. 1 lines 23-24).

Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to provide Fricke et al. with a welding agent that comprises at least two different solvents capable of at least bonding the edges of the polymeric portion of the plank in order to develop a seam with strength equal to the strength of the plastic sheets (col. 1 lines 23-24) as taught by Andrews.

### ***Response to Arguments***

14. Applicant's arguments with respect to claims 1-6,19-20,22-23,27 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

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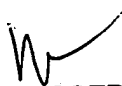
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jane Rhee whose telephone number is 571-272-1499. The examiner can normally be reached on M-F 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jane Rhee  
April 8, 2005



**PATRICK JOSEPH RYAN**  
**SUPERVISORY PATENT EXAMINER**